



ELA 10-Eclipse PILOT OPERATOR 'S
HANDBOOK
Version: V10-05

Issue date: 26th July 2016.
Last modification: 04th February 2019.

4.4 PRE TAKE-OFF CHECKS

Wind: Check direction of wind for take-off.

Fuel pressure checks (914 only): Switch OFF the left pump and verify the fuel pressure is correct, switch it ON and switch OFF the right one to verify the pressure. Switch ON the right again.

Keep both pumps ON during the whole flight.

Ignition check: Apply parking brakes.

Increase the throttle to reach 3500 rpm. Select "R" then "L" at the ignition switch, then back to "Both". The maximum drop allowed in rpm is 300, and the difference between "L" and "R" positions must not exceed 150 rpm.

(Max drop 300, difference 150).

Engine parameters: Confirm engine parameters are ready for take-off.

4.5 ROTOR PRE-ROTATION

Alignment: Runway alignment.

Engine: Move the throttle until the engine speed reaches 2200 - 2500 rpm.

Brakes: Disengage the wheels parking brake and hold the brake lever with your left hand.

WARNING

Do not engage the pre-rotator with the wheels parking brake ON. Hold the brake lever with your left hand. It is extremely dangerous to start the take-off run if the parking brake is not disengaged!



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Flight position: Hold the stick **fully forward** and **centred** with your right hand. With your left hand, move to "Flight" position the selector. Wait five seconds for the pneumatic system to fully charge.

WARNING

Before engaging the pre-rotator, check area is clear

Pre-rotation: Push and hold the pre-rotator button on the control stick with your thumb. This causes the pre-rotator to engage. You will hear the pre-rotator belt making some squeak, wait until the pre-rotator belt doesn't make noise, then increase the engine power slowly and gradually until reaching 220 rotor rpm.

Note

For shorter take-off distance it is possible to increase the rotor up to 280 – 300 rpm but note that the pre-rotation system will suffer greater effort so the parts life will be shorter.

CAUTION

Start the take-off with the rotor between 150 - 200 rpm requires a high skill. It is forbidden to proceed with take-off operations if the rotor is under 150 rpm.

4.6 TAKE-OFF

Once the pre-rotation procedure is finished gently move the control stick **fully back** to its stop, release wheel brakes and increase the engine power progressively.



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WARNING

**Make sure the control stick is fully back before start the take-off run.
A take-off run with flat rotor could have fatal consequences.**

CAUTION

Check the engine speed is 5400 rpm or more. If not, abort the take-off.

Use the rudder pedals to keep aligned with the runway.

Once the nose wheel lifts, move the control stick forward to keep it at approximately 10 cm off the ground while the gyroplane accelerates.

When the gyroplane take-offs perform a level flight until reach 90 - 100 km/h (best rate of climb) and then raise the nose to climb and maintain this speed until reaching the desired altitude.

WARNING

Gyroplanes are very controllable at low speeds. However, operation "behind the power curve" at low altitude could have fatal consequences.

Check all engine parameters are in green arc.

Use the pitch trim to adjust the speed of the gyroplane:

Trim back = Nose up = reduce speed.

Trim forward = Nose down = increase speed.

Note

Remember: adjust the speed with the control stick, climb and descend with engine power.